

## Boulder County Big Bluestem Progress Report

Study Number: NMPMC-S-0701-OT

In September of 2006, big bluestem (*Andropogon gerardii*) seed was collected by the Boulder County Parks Department and sent to the NRCS Los Lunas Plant Materials Center. The intent was to establish a 1/3-acre seed production field.

Big bluestem is a native, warm-season, perennial bunchgrass commonly found in prairies, dry soils, open woods in the southwest, and in zones that receive more than 14 inches of annual precipitation. This species is an excellent forage species that is highly palatable to all classes of livestock and elk. It does however, become coarse in texture late in the season.

Big bluestem transplants were produced by hand seeding 5,000 plug cells (3/4" x 3/4" x 2 1/2") on June 21, 2007. The plug soil mix contained two parts of Sunshine #1 media to one part of perlite. One pound of a three-month controlled release fertilizer (17-6-12) was added per four-cubic feet of the plug soil mix.

After nine days, most of the seed had germinated and seedlings had emerged. The seedlings were kept damp with an automated sprinkler system on a bench for three weeks, and then moved to the nursery to harden off and grow out for an additional four weeks.

On August 2, 2007, the seedlings were transplanted into Field 16 at the Los Lunas Plant Materials Center.



Big bluestem in Field 16 at the Los Lunas Plant Materials Center

This field was hand-hoed approximately every three weeks during the growing season (April – November). Other field maintenance activities for 2007 and 2008 are described in the following tables:

**Field Maintenance Activities – 2007**

Activity	08/02	08/10	08/23	09/10	10/26
Irrigation	2" application	2" application	2" application	2" application	2" application
Fertilized	70 lbs N 40 lbs P				

**Field Maintenance Activities – 2008**

Activity	02/19	04/01	05/05	06/07	07/02	07/25
Irrigation		2" application	2" application	2" application		2" application
Fertilized	40 lbs N 40 lbs P					40 lbs N
Herbicide					2,4-D	

To maintain seed purity, the field is managed by adhering to foundation seed standards. In July 2008, the field was inspected by New Mexico Seed Certification for isolation and noxious weeds.

As of today, August 20, 2008, the seed-head height on many of the plants is above 70 inches, and foliage height is near 25 inches. Seed maturity ranges from anthesis to seed ripe. Less than one percent of the flowers have ripe seed; the seed crop will be indeterminate. The crop will be harvested with a Flail-Vacuum Seed Harvester several times during the month of September. This machine is mounted to a front-end loader tractor and contains an elongated, seed-stripping rotary brush that creates a vacuum when in operation. This machine will harvest mainly ripe seed without destroying immature seed heads. As seed is harvested, it will be placed on an air drying table to prevent molding. During the winter of 2009 the seed will be cleaned and sent to Boulder County.



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